Paper Title: *M-Commerce: Evolution in Business.*
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M-commerce abstract.

We're moving toward into increasingly wireless world. Mobile phones are becoming important part of our daily lives. Mcommerce will drive economies to the 21st century using integrated Third Generation technology. Mcommerce will enhance productivity with high-speed data and cost effective mobile systems. Mcommerce opens unprecedented opportunities for mobile operators, Internet providers and commercial companies wanted to offer their products wirelessly. Business processes running in mobile devices, marketing opportunities, cash-free convenience for customers are advantages and availability's brought in by Mcommerce. Billing systems of mobile operators are specifically designed and suitable to run business processes, particularly small-size transactions. New multimedia applications and Internet services will provide unique technological capabilities for mobile devices, therefore will drive substantial wireless data traffic. User demand for more compelling content and applications will rise significantly in mobile environment. Undoubtedly (SMS) Messaging and voice traffic will generate substantial revenue for operators in the event of selling or buying products or services. Trust, commitment and satisfaction are key trends for all parties engaged in mobile commerce.

1. Introduction to E-commerce

The emergence of electronic markets and other types of online trading communities are changing the rules on many aspects of doing business. Electronic markets promise substantial gains in productivity and efficiency by bringing together a much larger set of consumers and producers and substantially reducing the search and transaction costs. In theory, buyers can then look for the best possible deal and end up transacting with a different seller on every single transaction. None of these theoretical gains will be realized, however, unless market makers and online community managers find effective ways to produce trust among their members. The production of trust is thus emerging as an important management challenge in any organization that operates or participates in online trading communities.

2. What`s M-commerce?

Brifely, It is wireless e-commerce. Mobile commerce is easiest and fastest way to do business. It involves mobile operators, remote service providers, commercial companies and financial institutions to engage in new way of business that haven`t existed before. It`s computing and communicating on the move. Mcommerce opens new evolutionary era in global business. It`s mobile solution for all engaged parties. In mobile business there will be no need for international custom regulations that vary country by country, therefore it will be business without borders. Business collaboration and new marketing opportunities in the consumer business segment have developed, met with widespread popularity and established a firm place for themselves. The gigantic growth rates for electronic business prove this.

Enormous rationalization potential has been achieved in the Business-to-Business (B2B) segment, e.g. logistics chains have been streamlined and sourcing processes optimized. And the Business-to-Consumer (B2C) segment, too, is striking out in new directions.

3. Managing M-commerce

New management tools is needed to maintain success of M-commerce. In this fast-changing wireless environment companies need to find new effective and efficient management perspectives. Many companies now shifting from Total Quality Management perspective into Learning Organizations. Mobile communication companies on the cutting edge of these environmental changes. In the learning organization every employee will engage in identifying and solving problems, enabling the organization to experiment, improve and increase its capability to learn, grow and achieve its purpose. Essential characteristic of learning organization is that they're flooded with information and knowledge. Information and knowledge especially very crucial aspect for companies which involved in mobile commerce, because they need to exchange and update them faster and thoroughly in order to gain competitive advantage. Fundamental features of learning organizations are collaboration and teamwork. It will encourage participants in mobile business continually implement and develop management strategies that will extend customer commitment and satisfaction. Intellectual potential and creativity of employees will determine and maintain success of mobile businesses to be valuable in the rapid changing marketplace.

4. Infrastructure.

Infrastructure of Mcommerce will be based on integrated Third Generation mobile technology. Core of this technology is based on Code Division Multiple Access platform.

Information are processed or transmitted bit by bit using pocket data. Speeds of data transmission are expected to be up to 2 mbps. Migrating to Universal Mobile Telephone System GSM operators will gain access to additional spectrum as well as the greater capacity and expanded functionality of the new system. 3G operators will use multi-mode and multi-band terminals. It will enable seamless handoff between GSM and UMTS networks. There are going to build UMTS networks as technology matures and demand increase. Investments for 3G will increase steadily.

3G bring comfortability to your home. The home network will be build with Bluetooth equipment. Bluetooth is a rapidly growing technology that enables personal area networks. It's a digital radio link technology for communication distances of 10 to 100 meters. Control and access all household items can be centered on the user in any place. These items will be connected via mobile phones to 3G/ Bluetooth terminal at home.
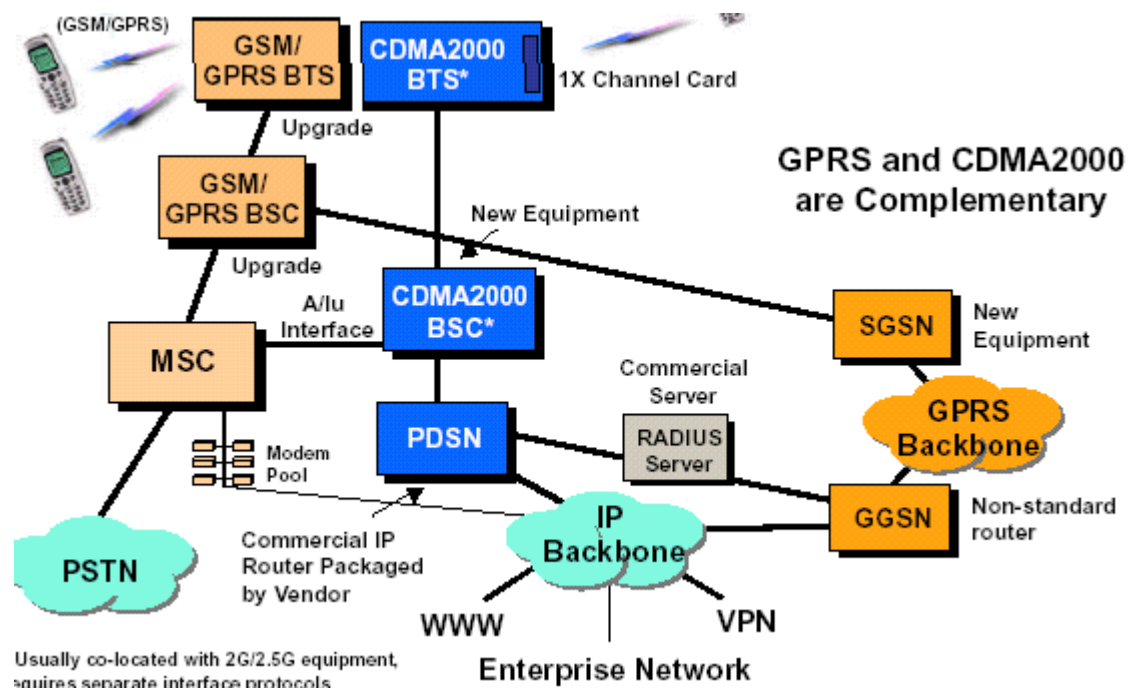

Figure 1: Infrastructure.

5. Payment systems.

Smart cards will save users credit card, insurance policy, driving license information in single microchip. E-wallet is smart card reader that could hold users private key. Billing systems of mobile operators are specifically designed to handle business process especially small-size transactions. Subscription for new multimedia applications can be ordered via mobile devices and then appear on subscriber's monthly bill. It's often advantageous to provide a gateway for external payment systems such as credit and debit

cards. The information can be stored by operator and rely on the providers authentication system to reduce fraud.

Mobile payment will fundamentally change the way financial institutions do business. This means that financial institutions have to proactively shape the market now to ensure their market position in the future. Important assets in connection with the role of mobile business payment services are the ability to process, clear and settle larger sums of money, in particular, with other financial institutions. The have the necessary risk management know-how and a trust-based customer relationship for all kinds of financial transactions.

6. Services.

Purchases of products or services via mobile devices will bring various institutions-mobile operators, banks, retail firms, and credit card issuers in one global market. Mobile operators should build online trust and commitment for parties engaged in Mcommerce. Financial transactions such as online banking transfers will grow due to Mobile commerce. There're various applications ranging from mobile commerce (e.g. banking, brokerage, trading, ticketing, auctions, vending machines), mobile services (e.g. emergency, control, fleet management), mobile office (e.g. video conferencing, scheduling, e-mail) to mobile entertainment (e.g. videos, games, gambling).

There will be different application revenue models. Mcommerce created new ways of generating revenue that haven't existed before. Applications will encourage voice and messaging traffic, which will be main source of revenue for mobile operators in the event of selling and buying products or services. Information that previously required file cabinets, phones, faxes, and trips to the office will be interactive, indexable, searchable, dynamic, and available on demand- anytime, anywhere. For mobile business providers, the focus is on the high availability and scalability of the payment system. Mobile payment solutions have to be able to be used universally, both in electronic business as well as in mobile business and the brick-and-mortar world. Payment transactions, even for small amounts, have to be able to be handled dependably and at low cost. Providers should also be able to generate statistical analyses in order to optimize their offerings to suit the needs of their target groups.
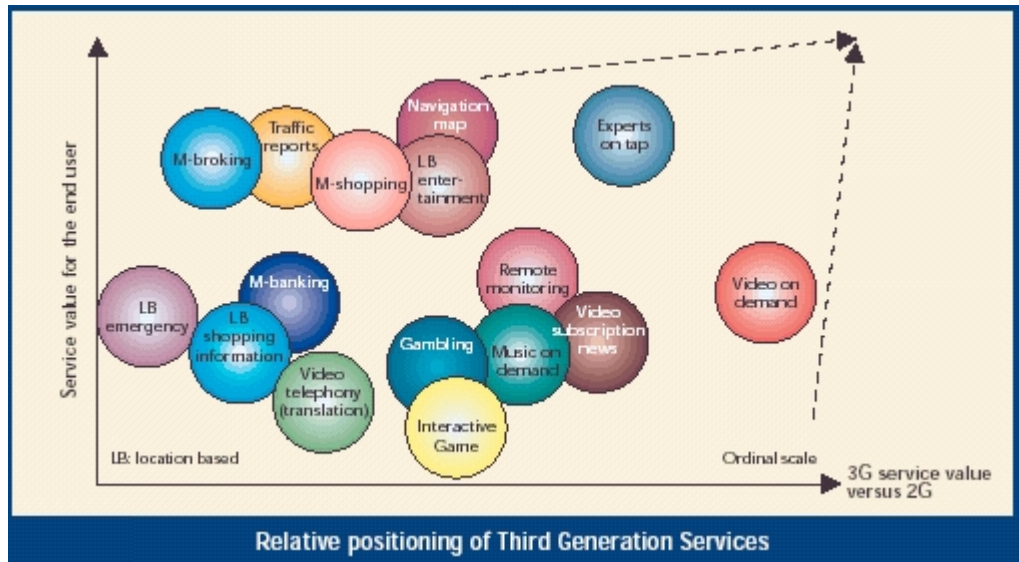
Figure 2: Services.

7. Security.

The major concern of mobile operators and businesses is security. Security will play crucial role for successful implementation and development of M-commerce. Undoubtedly access to mobile services should be secure in order to confirm customers trust and commitment.

Confidentiality, authentication, integrity and authorization are main features of security in mobile commerce. Confidentiality should be optained to keep information private. Authentication is required to prove the identity of an individual or application. Systems need integrity to ensure that information has not been manipulated. They need authorization or digital signing to make sure information can not be disowned. Therefore mobile devices will receive security upgrade. Phones are equipped with Wireless Identity Module, which can store a digital signature. When purchasing online you use your private key to create a digital signature. Then signature will be sent to online business, which then uses your public key to confirm your identity.

8. Benefits.

M-Commerce encourages people to use sophisticated and advanced multimedia applications that serve the needs of all parts of society. Everyone will benefit from mobile commerce. Merchants and customers will have cash-free convenience and detailed transaction statements. There will be marketing opportunities for best customers. Society will be more computer and mobile literate, it will increase travel and mobility. Markets will face substantial growth due to fastest online movement of equities, thus it will enhance productivity. Wireless web will further realign and revolutionize markets and business practices. Advertising will be interactive and based on consumer's choice,

suppliers will exploit direct access to customers, and pace of technological change will accelerate. Planners, marketers and investors must quickly be prepared to take advantage of new business models.

9. Further Development.

Fourth and Fifth generation mobile services will drive economies of scale into new era of communication technologies. Microwave and milliwave bandwidth, software wireless units, adaptive array antennas are influential factors in development of 4G generation mobile services. Data speed will further increase to be up to 20mbps. In principle Fourth generation will allow high-quality smooth video and data transmission. The capabilities of mobile commerce applications will further accelerate and enhance with the arrival of new technologies.

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